

FONTES et al.
Appl. No. 10/521,239
Atty. Ref.: 3665-132
Amendment After Final Rejection
October 17, 2008

REMARKS

Reconsideration is requested.

Claims 23, 29, 31-34 and 45-50 are pending. Claims 1-22, 24-28, 30, 32-46, 49 and 50 have been canceled, without prejudice. The claims have been amended, without prejudice, to advance prosecution. Claims 23, 29, 31, 47 and 48 will be pending upon entry of the present Amendment. Entry of the present Amendment is requested.

The Examiner interview with the undersigned on June 30, 2008 is acknowledged, with appreciation. The Examiner's statements in the Interview Summary are accurate in their brief description of the issues discussed.

Claim 23 has been amended to include the details of claims 33, 34, 45, 46, 49 and 50. Ascorbic acid (i.e., vitamin C) has been included in the embodiments of claim 23. No new matter has been added. The amendments do not raise new issues requiring further consideration and/or search.

Entry of the present Amendment will at least reduce the issues for appeal by making moot the following rejection: the Section 103 rejection of claims 32, 33, 34, 46 and 49 over Geffard in view of Austria (J. Pharm. Biom. Anal. 1997, Vol. 15, pp 795-801) will be moot upon entry of the present Amendment; and the Section 103 rejection of claims 45 and 50 over Geffard in view of Austria and Fujinami (Chem. Pharm. Bull. 2001, Vol. 49, Issue 5, pp 642-644), will be moot upon entry of the present Amendment.

Entry of the present Amendment is requested.

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The Section 103 rejection of claims 23, 31 and 48 over Geffard (U.S. Patent No. 6,114,388), is obviated by the above amendments.

The Section 103 rejection of claim 29 over Geffard and Djoneidi (Gene, 2000, pp 223-231), is obviated by the above amendments.

The Section 103 rejection of claim 47 over Geffard in view of Austria (J. Pharm. Biom. Anal. 1997, Vol. 15, pp 795-801) is obviated by the above amendments.

Entry of the present Amendment and withdrawal of the above art rejections are requested along with consideration of the following.

The applicants understand the Examiner to believe that the cited art would have motivated one of ordinary skill in the art to have allegedly utilize vitamin C to treat Charcot-Marie-Tooth disease. See page 7 of the Office Action dated June 19, 2008.

The applicants submit, with due respect, that there was no motivation in the cited art to have used vitamin C itself for therapy. The Examiner is urged to appreciate that the polylysine structural unit of the compositions of Geffard are considered by the art to play a major role. One of ordinary skill in the art will appreciate that Geffard specifically focuses on polylysine conjugates. Polylysine conjugates are compounds where polylysine is covalently bound to the cited other compounds. The linkage between vitamin C and the polylysine is between the amine group of the latter and the oxo group of vitamin C. Thus, there is no incitation by Geffard to develop a treatment method using the compounds of the claims to selectively treat Charcot-Marie-Tooth disease (CMT disease).

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The teachings of Djoneidi fail to cure the deficiencies of Geffard. Claim 29 is therefore submitted to be patentable over the combination of Geffard and Djoneidi which is not believed to provide any details regarding the use of compositions for treatment of CMT disease. Rather, Djoneidi is understood to disclose methods for better understanding PMP22 gene activity involved in the CMT1a. The document fails to teach or suggest the use of any compound for its treatment.

As for the cited Austria, the document is understood to lack information about the activity of disclosed derivatives and/or their relationship to treatment of CMT disorders. Combining Geffard with Austria would not have led to the presently claimed invention. At best, the combination of cited art may have led to the replacement of the polylysine-vitamin C conjugate by a derivative disclosed in Austria. As Geffard teaches polylysine is essential for the activity however, one of ordinary skill in the art would not have been motivated to replace same. The stability disclosed by Austria may, at best, have led one of ordinary skill to replace ascorbic acid, in the conjugate, by another derivative. The claims are submitted to be patentable over Geffard in view of Austria or any other of the art of record.

The claims are submitted to be patentable over the art of record. Entry of the present Amendment and withdrawal of the Section 103 rejections are requested.

The applicants submit that no treatment exists in the art to reverse or slow the natural disease process for Charcot-Marie-Tooth disorder. Due to the present invention, orphan designation was granted by EMEA for vitamin C in the treatment of the Charcot-Marie-Tooth disease type Ia (CMT1a). Moreover, worldwide clinical assays are ongoing

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as to obtain drug approvals. The Examiner is requested to see the attached copy of the registration by the EMEA of vitamin C as an orphan medical product in this regard.

In addition, attached are copies of the following:

Kya et al. "Ascorbic acid inhibits *PMP22* expression by reducing cAMP levels"
Neuromuscular Disorders 17 (2007) 248-253;

Kya et al. "Analysis of the benefits of vitamin cocktails in treating Charcot-Marie-Tooth disease type 1A" *Muscle & Nerve*, August 2008, pp 1052-1054; and

Passage et al. "Ascorbic acid treatment corrects the phenotype of a mouse model of Charcot-Marie-Tooth disease" *Nature Medicine*, Published online 21 March 2004; doi: 10.1038/nm 1023,

which the applicants believe demonstrate that the mechanism involved in the treatment of CMT is independent from the antioxidant properties of vitamin C derivatives. The attached is believed to demonstrate that the selection of vitamin C or derivatives thereof, of the presently claimed invention, is not believed to be related to an antioxidant property.

Consideration of the attached are requested pursuant to MPEP § 609.05(c). The Examiner is requested to confirm consideration of the attached evidence in the next Action from the Examiner.

The claims are submitted to be in condition for allowance and entry of the present Amendment and a Notice of Allowance are requested.

The Examiner is requested to contact the undersigned, preferably by telephone, in the event anything further is required.

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Respectfully submitted,

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